The Sugar Planters' Journal, New Orleans, La., January 2, 1904, remarks editorially, in part, as follows, regarding the frost warnings issued to sugar planters in Louisiana:

During the late sugar campaign we were again given an example of the inestimable value the local Weather Bureau is to the sugar planters of this State, which class of agriculturalists are more benefited than any other through the warnings issued by the Bureau in question.

BOSTON FORECAST DISTRICT.

The storm of the 20th–21st was severe, and the gales and heavy seas that attended it caused shipping to seek harbors of safety. The storm of the 26–27th was also severe, especially along the southern coast, where shipping was imperiled and several lives were lost. Timely warnings of the gales resulted in much benefit to shipping and other interests.—*J. W. Smith, District Forecaster.*

NEW ORLEANS FORECAST DISTRICT.

No severe gales occurred. Warnings were issued on the 12th for a general cold wave over the greater part of the district, and the warnings were fully justified. Ample warning was also given of other frosts and freezing temperatures that occurred in the sugar and trucking districts during the month.—*I. M. Cline, District Forecaster.*

CHICAGO FORECAST DISTRICT.

As a rule warnings were issued far in advance of the cold waves of the 11th to 13th, 21st–22d, 25–26th, and 29–30th, and advices were issued in advance of the snowstorms of the 12th, 25th, and 28th. Timely and ample warning was given shipping interests of the high winds and gales of the month. The month was unusually free from lake disasters, and it is probable that the storm warnings were, in many cases, a great benefit.—*H. J. Cox, Professor and District Forecaster.*

DENVER FORECAST DISTRICT.

No severe storms or cold waves occurred, and the month was generally mild and dry.—*F. H. Brandenburg, District Forecaster.*

SAN FRANCISCO FORECAST DISTRICT.

On the 7th a disturbance over lower California resulted in nearly one-third of an inch of rain at San Diego. With this exception the month was one of prolonged fair weather.—*A. G. McAdie, Professor and District Forecaster.*

PORTLAND, OREG., FORECAST DISTRICT.

The month was unusually quiet on the north Pacific coast, the only storms of consequence occurring on the 1st, 14th, 15th, and 19th. In each instance storm warnings were displayed well in advance of the storms. No severe cold weather occurred.—*A. B. Wollaber, Acting District Forecaster.*

RIVERS AND FLOODS.

At the end of December the Mississippi River was frozen from the headwaters to a short distance below the mouth of the Des Moines River. It remained open, however, during the first half of the month, except in the vicinity of Leclaire, Iowa, where it was closed during the entire month. From Hannibal to Cairo there was much heavy floating ice, and navigation between St. Louis and Cairo was suspended on the 9th. No ice was reported below Cairo.

The Missouri River was closed as far south as Sioux City, Iowa, and by the 7th of the month it had closed practically to Omaha. It did not close below, although floating ice was observed almost daily.

There were large quantities of ice in the Ohio River and its tributaries, necessitating the suspension of navigation at various points, particularly above Cincinnati. Many gorges were reported between Wheeling and Cincinnati, but they passed away without unusual incident.

The rivers of New England, except the Housatonic and the extreme southern Connecticut, were generally closed, except where kept open by artificial means. The Hudson River from Albany northward and the Mohawk River were frozen solid, and at the end of the month there were 10 inches of ice at Albany and the ice harvest was in progress.

The upper Susquehanna at Wilkesbarre closed on the 16th for the first time during the present season, and at Harrisburg on the 17th. The ice moved out five days later, but on the 28th the river at Wilkesbarre was again frozen over. At Lockhaven, Pa., the west branch of the Susquehanna was frozen during the entire month, and at Williamsport from the 15th to the 21st. The Juniata River was also icebound during the greater portion of the month.

There was considerable ice in the Potomac River and its tributaries, and by the end of the month the Shenandoah and upper Potomac were practically closed. A little ice was observed on the 18th and 19th in the upper Roanoke River, and this was about the southern limit of ice for the month.

In all the rivers the stages of water were about normal for the season and afforded no features of special interest.

The highest and lowest water, mean stage, and monthly range at 194 river stations are given in Table VII. Hydrographs for typical points on seven principal rivers are shown on Chart V. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock on the Arkansas; and Shreveport, on the Red.—*H. C. Frankenfield, District Forecaster.*

AREAS OF HIGH AND LOW PRESSURE.

Movements of centers of areas of high and low pressure.

Number.	First observed.			Last observed.			Path.		Average velocity.	
	Date.	Lat. N.	Long. W.	Date.	Lat. N.	Long. W.	Length.	Duration.	Daily.	Hourly.
High areas.		°	°		°	°	*Miles.*	*Days.*	*Miles.*	*Miles.*
I	2, p. m.	48	122	5, p. m. 8, a. m.	43 38	108 80	950 3,800	3.0 5.5	317 691	13.2 28.8
II	10, a. m.	28	97	13, a. m.	46	60	2,600	3.0	867	36.1
III	13, p. m.	50	107	16, a. m.	38	87	1,750	2.5	700	29.2
IV	15, a. m.	53	105	19, p. m.	42	70	2,200	4.5	489	20.4
V	18, a. m.	37	122	21, p. m.	28	83	2,850	3.5	814	33.9
VI	21, a. m.	53	105	23, p. m.	35	75	2,300	2.5	920	38.3
VII	25, a. m.	53	108	28, a. m.	27	80	2,700	3.0	900	37.5
VIII	27, a. m.	51	104	29, p. m.	46	60	2,900	2.5	1,160	48.3
IX	28, p. m.	53	105	*1, a. m.	30	82	2,550	3.5	728	30.0
Sums							24,600	33.5	7,586	316.0
Mean of 10 paths							2,460		758	31.6
Mean of 33.5 days									734	30.6
Low areas.										
I	1, a. m.	54	114	5, a. m.	48	68	2,650	4.5	589	24.5
II	5, p. m.	51	114	8, a. m.	45	64	2,550	2.5	1,020	42.5
III	7, p. m.	32	100	10, p. m.	48	68	2,425	3.0	808	33.7
IV	8, a. m.	53	105	9, p. m.	42	87	1,150	1.5	767	32.0
V	10, p. m.	47	112	13, p. m.	46	60	3,100	3.0	1,033	43.0
VI	17, a. m.	39	120	21, a. m.	47	65	3,250 3,625	4.0	812 906	33.8 37.8
VII	19, p. m.	50	120	23, a. m.	48	53	3,175	3.5	907	37.8
VIII	24, a. m. 24, p. m.	54 28	114 97	26, p. m.	46	60	3,050 2,500	2.5 2.0	1,220 1,250	50.8 52.1
IX	25, p. m.	54	114	28, a. m.	46	60	2,625	2.5	1,050	43.8
Sums							30,100	29.0	10,362	431.8
Mean of 11 paths							2,736		942	39.3
Mean of 29.0 days									1,038	43.2

*January.

For graphic presentation of the movements of these highs and lows see Charts I and II.—*George E. Hunt, Chief Clerk, Forecast Division.*